

Morse, List, 106, Beutenmüller, Orth. N. Y., 306, Scudder, Rev. Melanopli, 278, pl. xix, figs. 1-4.

Measurements from 258 ♂, 173 ♀:— Antenna: ♂, 6.5-10; ♀, 6.5-9. H. fem.: ♂, 10.7-13.3; ♀, 11-15. Teg.: ♂, 13-20; ♀, 15.5-23. Body: ♂, 16-23; ♀, 18-28. Total: ♂, 18.7-27.5 (average 23-25); ♀, 22-30.7. Teg. vs. H. fem.: ♂, = to +5; ♀, -1 to +5.

Though extremely plentiful, no marked varieties occur in this species in New England, the only variation worthy of note being in the color of the hind tibiae. These are so constantly red that a locust having them colored otherwise may be looked upon as almost sure to belong to another species, *atlanis*, *minor*, or *extremus*. Still, examples of *femur-rubrum* do occur with tibiae either pale (yellowish), or even greenish or blue. These are, however, extremely rare.

This is undoubtedly the commonest, most ubiquitous, "grasshopper" found in New England, occurring everywhere throughout the district in every plat of grass or sedge from sea-shore to mountain-summit. The destruction caused from time to time by locusts in New

England is usually ascribed to this species, and with good reason, though in some cases, particularly when caused by migratory swarms, it is probable that *atlanis* is largely if not chiefly concerned. In August, 1892, I received complaints of grasshopper injuries to garden crops, tomatoes, beans, etc., in the vicinity of Norway, Me. These proved on investigation to be entirely due to this species, which was very abundant locally, and no specimens of *atlanis* could be found. It is very plentiful at times on some of the islands off shore, as I have found it on Cuttyhunk, Mass., and Block Island, R. I., where it had the habit of collecting in great numbers on the warm, sunny sides of stone walls in the late afternoon and remained over night.

While it is almost ubiquitous it is in general most plentiful in meadows and the damper portions of mowinglands and pastures, among the more dense and succulent vegetation.

It reaches maturity in the latter part of July and is found throughout the rest of the season; I have taken specimens in the vicinity of Wellesley from July 25 to Nov. 8.

SOME NEW GENERA OF BEES.

BY WILLIAM H. ASHMEAD.

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Family NOMADIDAE.

Zacosmia n. g.

Marginal cell elliptical, not longer than the first cubital and separated from the costa

at apex; the submarginal cells along the cubitus are of unequal length, the first and third subequal, the second either petiolate or narrowed into a point above; scutellum subbilobed, the axillae rounded or convex be-

hind; abdomen short, above subglobose, beneath flat; body covered with a short dense fine downy pubescence resembling mold; abdominal segments 2-5 ornamented at their apical margins with a peculiar series of brown triangular emarginations impressed upon the densely pubescent surface; labial palpi 3-jointed, the first joint stout, longer than joint 2-3 united; claws with a tooth within. Type *Melecta maculata* Cresson.

This genus comes apparently very close to *Leiopodus* Smith, but differs decidedly in the venation of front wings; in the shorter abdomen with its peculiar emarginated or zigzag ornamentation, which is quite unique in the group; in having the labial palpi 3-jointed not 4-jointed; and by the claws having a strong tooth within.

An examination of the type of Mr. Cresson's genus *Coelioxoides*, last December, has convinced me that it has nothing to do with the subfamily *Coelioxinae* and that it should be placed with this family.

Family STELIDIDAE.

Subfamily I, STELIDINAE.

Melanostelis n. g.

Differs from the four other genera belonging to this family, namely, *Protostelis* Friese, *Stelidomorpha* Morawitz, *Stelis* Panzer and *Parevaspis* Ritsema, by having the second submarginal cell receiving both recurrent nervures.

In the genera mentioned, the second recurrent nervure is received *behind* the second transverse cubitus, or it is interstitial. Its other characters are: Mandibles tridentate; maxillary palpi 2 jointed; abdomen black or blue-black, with white bands, the last dorsal segment compressed into a carina at apex, while the last ventral segment is tridentate at apex. Type *M. betheli* n. sp.

Melanostelis betheli n. sp.—♀.—Length 9 mm. Black, clothed with sparse black hairs, the face with a few grey hairs inter-

mixed with the black hairs; abdomen above with subapical white bands on first four segments, those on the first and second extending all across the back to the lateral margins, the one on the third much abbreviated, while the one on the fourth is reduced to an oblong white mark; legs black, but the tibiae and tarsi have a piceous tinge in certain lights; tibiae at apex produced outwardly into a strong angulated process; basal joint of hind tarsi much thickened; tibial spurs long, strong.

Hab.—Olympia, Washington.

Described from a single specimen, received from Mr. L. Bethel, captured June 2, 1897.

The genera of the *Stelidinae* now known, may be tabulated as follows:—

Genera of the Stelidinae.

Second recurrent nervure received behind the second transverse cubitus or interstitial 2
Second submarginal cell receiving both recurrent nervures.

Abdomen black or blue-black, with white transverse bands; mandibles tridentate; maxillary palpi 2-jointed; last ventral segment tridentate, ♂ unknown.

Melanostelis Ashm.

2. Abdomen black or rufous, sometimes ornate with white or yellow spots; maxillary palpi 1 or 2 jointed (rarely wanting); labial palpi 4-jointed.

Scutellum without lateral teeth behind.

Head as wide as the thorax; clypeus not lengthened, well rounded; maxillary palpi 1 or 2 jointed; abdomen semiglobose, the segments broadly banded with yellow or white as in *Anthidium*, ♀ with the anal segment entirely rounded; ♂ ending in a strong thorn.

Protostelis Friese.

Head as wide as the thorax; clypeus lengthened and deeply emarginate; maxillary palpi 1 jointed; abdo-

men cylindrical, the segments with large white spots; ♀ with the apical margin of the sixth segment toothed; ♂ with the seventh segment armed with a tooth. *Stelidomorpha* Morawitz.

Scutellum with lateral teeth behind.

Head narrower than the thorax; clypeus rounded not lengthened; maxillary palpi 2 jointed; abdomen rounded, black, rarely with small indistinct maculae; ♂ with the seventh segment rounded.

Stelis Panzer.

Abdomen black, or rufous and black, clothed with a scattered griseous pubescence; mandibles tridentate.

Scutellum rounded and produced behind over the base of the abdomen, the apex with a deep median depression; apical abdominal segment in ♂ tridentate.

Parevaspis Ritsema.

Subfamily II, COELIOXINAE.

Neopasites, n. g.

Differs principally from *Phileremulus* Ckll., and *Neolarra* Ashm., by having a long marginal cell, which is much longer than the stigma, rounded at apex with a slight appendage. The front wings have two complete submarginal cells, the first being the longer. It also differs from *Pasites* Jurine, *Homachthes* Gerstaecker, and *Schmiedeknechtia* Friese, in that the first recurrent nervure joins the first submarginal cell. Type *Phileremulus fulviventris* Cress.

Hoploparasites, n. g.

This new genus falls in a group of genera near *Melittoxena* Morawitz and *Caenoprospis* Holmberg: The axillae are acute or toothed at apex, the scutellum proper (middle lobe) also armed with a median tooth at apex, so that apically, with the

acute axillae, the scutellum appears tridentate. The abdomen is red and black, the segments being banded with an appressed whitish pubescence. Type *Phileremulus productus* Cress.

Family PANURGIDAE.

Hylaeosoma n. g.

Comes nearest to the genera *Dasygoda* Latr. and *Calliopsis* Smith, in having the first submarginal cell distinctly longer than the second, but differs from both, in having the median cell much longer than the submedian.

The front wings have two recurrent nervures, the first received by the first submarginal cell, the second received by the second submarginal cell near its apex, the latter cell being almost quadrate, a little wider (or higher) than long.

The head, seen from in front is oblong, nearly twice as long as wide, the eyes being very long, three times as long as wide. Antennae clavate, the flagellum being gradually thickened towards apex. Maxillary palpi 6-jointed; labial palpi 4-jointed, the first joint the longest. Mandibles tridentate at apex.

Type *H. longiceps* Ashm. MS. from St. Vincent.

Cockerellia n. g.

To this genus belong most of the species described recently by Prof. Cockerell under the genus *Perdita*.

It differs decidedly from *Perdita*, as defined and figured by Smith, in having much longer 4-jointed labial palpi, the first joint being very long and usually somewhat thickened, *fully twice as long or even more than twice as long as joints 2-4 united*; supraclypeal plate quadrate, separated; clypeus at base trapezoidal: hind trochanters apparently without flocculus; color aeneous, bluish, or black, usually with pale markings, the abdomen always banded or maculated; claws cleft. Type *Perdita? hyalina* Cresson.

Philoxanthus n. g.

Agrees very closely with *Cockerellia* in venation and palpal characters, but is readily distinguished by the color of body which is wholly yellow, the abdomen being immaculate; the supraclypeal plate not being distinctly separated; the clypeus being semi-circular at base; while the hind trochanters have a distinct flocculus; claws simple. Type *Perdita beata* Ckll.

Nomadopsis n. g.

Separated at once from *Perdita*, *Cockerellia* etc. by the longer marginal cell which is much longer than the stigma, fully twice as long, or as long as or longer than the first discoidal cell; submedian cell a little shorter than the median; maxillary palpi 4-jointed, the first joint very long, fully 7 times longer than joints 2-4 united, with a contraction at base. Type *Perdita zonalis* Cr.

NEW TETTIGONINAE, WITH NOTES ON OTHERS.

BY C. F. BAKER, AUBURN, ALA.

Xerophloca major n. sp. Length 7.5 mm., width across pronotum 2.5 mm. Larger, more robust, and more coarsely pitted than *viridis*. The vertex proportionally much larger than in *viridis*, and broadly, evenly rounded in front, nor at all even subangulate.

Described from two females in the National Museum, collected by Mr. E. A. Schwarz in Virginia. In the National Museum there is also a specimen from the Fitch cabinet, bearing the label "*Xerophloca major*, Arkansas, W. S. Robertson." I have a large series of *viridis* Fab. from California, Colorado, Arizona, New Mexico, Texas, Kansas, Alabama, and Brazil. *Major* differs as above stated from anything in this series. The forms of this genus, occurring in the Northeast, should be collected in large series at many points.

Tettigonia geometrica Sign. This species is found in the United States, but has probably been confused with *bijida* Say, which it resembles in a most striking manner. Besides some minor details, *geometrica* is smaller and lacks the whitish lines on elytra. I have it from Illinois, Washington, D. C., Alabama and Louisiana.

Tettigonia circellata n. sp. Length 6-6.5 mm. Pale yellowish, the legs and base of

venter sometimes bright orange. Front usually with two longitudinal black stripes on disc, a very short one on margin next each antenna, and one transverse on clypeal suture; all these markings may be obsolete. Vertex with a black point at tip and another at center of disc; two very short transverse lines behind, their inner ends embracing the ocelli, and a large incurved line on each side near the anterior margin, arising near the tip; these markings vary in intensity but are distinct in all the specimens. Pronotum, except anterior margin, pale blue; disc with four black spots, one on either side before the middle and one on either side behind the middle; other small dots may occur between these. Scutellum yellowish, with two more or less exposed dots at base and transverse line, black. Elytra bright blue by reflected light, the apical margin transparent and the principal veins blackish; by transmitted light, the elytra appear deep smoky, with a slight bluish tinge. Wings deep smoky throughout. Prosternum, dorsum largely, and sometimes a median longitudinal row of small dots on venter, black or blue-black.

Last ventral segment of female twice length of preceding, medially raised into a strong keel, the acute point of keel termin-